

U.S.S.N.: 09/902,037
Filed: July 10, 2001
Inventors: Peter R. Bloem et al.

REMARKS

This is in full and timely response to the non-final Office Action of June 5, 2002. Reexamination and reconsideration are respectfully requested.

I. The Specification Provides Proper Antecedent Basis for the Claims.

The Examiner objected to the specification for allegedly failing to provide proper antecedent basis for the claimed subject matter. As will be demonstrated below, the specification does provide proper antecedent basis for all claimed subject matter. Claim 7 has been revised to no longer state that the annular rim has a thickness of 0.093 inches. The Examiner's attention is drawn to page 7 of the application which states that the diameter of the disc is about 8.781 inches, which is less than 9 inches, and that the "ratio of the height of the flight plate 16 relative to the diameter of the disc 10 is preferable limited to about 1 to 9." Furthermore, page 6 of the application states that the thickness of the flight plate 16 in transition area 14 is 0.093 inches. As demonstrated above, the specification provides support for the subject matter as claimed and thus provides a proper antecedent basis. Additionally, because the claims form part of the originally filed application, the claims themselves provide support for the claimed dimensions. The objection to the specification should therefore be withdrawn.

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II. The Claims Comply With 35 U.S.C. § 112, second paragraph.

The Examiner rejected claims 4 and 14 because they recited "uni-directional surfaces" and claims 5 and 15 because they recited "segmented, staggered, uni-directional surfaces." The Examiner asked what are uni-directional surfaces and wondered whether the phrasing in claims 5 and 15 encompassed segmented or staggered or uni-directional surfaces, segmented and staggered and uni-directional surfaces, or some other combination. The Examiner also questioned the meaning of "having a low profile."

The uni-directional, segmented, and staggered gripping surfaces are best shown in Figure 2. As described on page 8, the gripping surface 18a is segmented and staggered as opposed to being continuous such as with the annular ridges and grooves found in a typical flying disc. As mentioned in the "Background" section of this application on page 2, many conventional flying discs have a set of annular ridges separated by grooves which provide a gripping surface along an edge of the flight plate. The claimed gripping surfaces, such as those shown in Figure 2, are not continuous surfaces but instead form individual segments which are staggered relative to each other. In addition to being staggered and segmented, the gripping surfaces are also uni-directional. The segmented surfaces are oriented in a tangential direction relative to the flying disc. In this manner, the gripping surfaces provide a greater frictional force to movement along a radial direction than movement along a tangential direction along the disc. To avoid any possible confusion, claims 5 and 15 have

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been revised to state that the surfaces are "segmented, staggered, and uni-directional." Thus, the surfaces are segmented and staggered and uni-directional.

The Examiner also considered claims 5 and 15 to be indefinite because they recited that the surfaces have a low profile. The low-profile of the gripping surfaces, as explained on page 8, "reduces the tendency of the gripping surface 18 to collect and retain foreign particles." Nonetheless, to avoid any possible confusion, claims 5 and 15 have been revised to no longer recite that the surfaces have a low profile.

The Examiner rejected claims 6 and 16 on the grounds that the claims were considered to be vague and indefinite. Claims 6 and 16 state that the first and second gripping surfaces "present a greater frictional force to movement along the disc in a radial direction than to movement along the disc in a tangential direction." As described above, the gripping surfaces shown in Figure 2 provide such a benefit with the segmented, staggered, and uni-directional surfaces. Claims 6 and 16 have been revised to state that the first and second gripping surfaces "have uni-directional surfaces to" present a greater frictional force to movement along the disc in a radial direction than to movement along the disc in a tangential direction. The claims now provide sufficient structure and are not merely functional, as alleged by the Examiner.

For at least the above reasons, the claims in their present condition now comply with § 112, second paragraph. The Examiner is respectfully requested to withdraw this rejection.

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III. The Claims Are Novel

The Examiner rejected claims 1 to 6 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,906,007 to Mitchell. The Examiner believed Mitchell to disclose all features of the claimed flying disc, including the annular rim, flight plate, transition area, and the first and second gripping surfaces. As will be demonstrated below, Mitchell does not anticipate the subject matter of the claims.

The disc as set forth in claim 1 includes an annular rim, a flight plate formed in a central portion of the disc, and a transition area joining the annular rim to the flight plate and presenting a sloped surface. In making this rejection, the Examiner argued that the annular rim 12, annular section 10, and surface 17 in Mitchell corresponds to the claimed annular rim, flight plate, and transition area, respectfully. Claim 1 further states that the disc includes a first gripping surface formed on an upper side of the transition area and a second gripping surface formed on a lower side of the transition area. Mitchell does not teach first and second gripping surfaces formed in any part of Mitchell's alleged transition area 17.

The Examiner has apparently taken the interpretation that any surface can be a "gripping surface" regardless of the surface contour. To eliminate this possible interpretation, claim 1 has been revised to state that the gripping surfaces are formed "of irregular surfaces" and thus do not comprise a smooth surface. Mitchell clearly does not have any such surfaces formed on any portion of the area 17, let alone portions of both the

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upper and lower sides of area 17. Instead, the surfaces of Mitchell's area 17 appear smooth and would not offer a surface optimal for gripping and throwing a disc.

The Examiner also contended that Mitchell discloses gripping surfaces which are comprised of segmented raised surfaces as well as staggered raised surfaces. As demonstrated above, the area 17 identified by the Examiner as the claimed transition area does not comprise any gripping surfaces having irregular surfaces. The transition area 17 in Mitchell furthermore does not have any segmented and/or staggered raised surfaces as set forth in claims 2, 3, 12, and 13. If the Examiner intends to repeat this rejection, the Examiner is respectfully requested to identify what surfaces within Mitchell are considered to be the claimed first and second gripping surfaces having segmented and/or raised surfaces.

For at least the above reasons, claims 1 to 6 are novel and are not anticipated by Mitchell. The rejection of these claims should therefore be withdrawn.

IV. The Claims are Non-Obvious over Mitchell.

The Examiner rejected claims 7 to 16 under 35 U.S.C. § 103 as being unpatentable over Mitchell. With respect to claims 7 to 10, the Examiner contended that it would have been obvious to have provided the claimed dimensions "for the purpose of making the devices easier to play with." With respect to claims 10 to 16, the Examiner also argued that it would have been obvious to have provided the claimed dimensions "for the purpose of making the devices easier to play with."

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The subject matter of claims 7 to 16 would not have been obvious to one of ordinary skill in the art. The disc having the claimed dimensions provides a number of advantages which are not apparent to those skilled in the art. For example, as set forth on page 9, the disc 10 is found to travel approximately 10 to 20 percent further than other canine discs when thrown under similar conditions. As set forth on page 10, the disc is well suited for children and dogs because it is smaller and lighter in weight. Despite being smaller and lighter, the dimensions of the disc allow it to fly farther than other canine discs when thrown under similar conditions. The disc presents a smaller diameter as well as a lower profile, which is especially beneficial to dogs. The diameter of the annular rim, thickness of the rim, thickness of the flight plate and transition area, and the ratio of the flight plate height to a diameter of the annular rim all contribute to the above-mentioned benefits. These combination of dimensions are unique and offer a vastly superior flying disc.

If the Examiner intends to maintain this rejection, the Examiner is respectfully requested to provide some suggestion or motivation for the claimed disc having this combination of dimensions. It is not believed that the stated reason that the disc "would be easier to play with" gives sufficient credit to the complexities in designing and manufacturing a disc. For example, one of the dimensions claimed is that the diameter of the annular rim is less than 9 inches. In general, a smaller disc is in fact harder to play with since it requires a greater amount of skill on the thrower to make an accurate throw and it also makes it more difficult to make a longer throw. As mentioned above, despite being a small disc, a disc

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according to the invention can actually be thrown 10 to 20 percent farther than conventional dog discs. Thus, if one of ordinary skill in the art was motivated to make a disc that was easier to play with, one would have desired a larger disc.

The Examiner is respectfully requested to withdraw the rejection of claims 7 to 16 under § 103 as being unpatentable over Mitchell. As demonstrated above, the claimed features and dimensions present a unique combination that would not have been suggested to one of ordinary skill in the art.

V. CONCLUSION

For at least the above reasons, claims 1 to 16 are allowable. If the Examiner does not intend to issue a Notice of Allowance, the Examiner is respectfully requested to contact the undersigned attorney in order to resolve any remaining matters.

Please charge any additional fees or credit any overpayment to Deposit Account No.

11-0855.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In accordance with 37 CFR 1.121(b), the following replacement paragraphs show all the changes made by the foregoing amendment relative to the previous version of the paragraphs.

- 1 1. (Amended) A disc for being thrown in the air, comprising:
 - 2 an annular rim formed along an outer periphery of the disc;
 - 3 a flight plate formed in a central portion of the disc;
 - 4 a transition area joining the annular rim to the flight plate and presenting a sloped surface between the annular rim and the flight plate;
 - 5 a first gripping surface formed of irregular surfaces in at least a first portion of the transition area on an upper side of the disc; and
 - 6 a second gripping surface formed of irregular surfaces in at least a second portion of the transition area on a lower side of the disc;
 - 7 wherein the first and second gripping surfaces provide frictional surfaces to a person
 - 8 throwing the disc.

- 1 4. (Amended) The disc as set forth in claim 1, wherein the first and second gripping
- 2 surfaces are comprised of uni-directional surfaces [having a low profile].

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1 5. (Amended) The disc as set forth in claim 1, wherein the first and second gripping
2 surfaces are comprised of segmented, staggered, and uni-directional surfaces [having a low
3 profile].

1 6. (Amended) The disc as set forth in claim 1, wherein the first and second gripping
2 surfaces have uni-directional surfaces to present a greater frictional force to movement along
3 the disc in a radial direction than to movement along the disc in a tangential direction.

1 10. (Amended) A disc for being thrown in the air for use with canines, comprising:
2 an annular rim formed along an outer periphery of the disc and having a diameter less
3 than 9 inches [and a thickness of at least 0.093 inches];
4 a flight plate formed in a central portion of the disc;
5 a transition area joining the annular rim to the flight plate and presenting a sloped
6 surface between the annular rim and the flight plate;
7 flight plate and transition area having a thickness greater than 0.90 inches;
8 wherein a ratio of a height of the flight plate to a diameter of the annular rim is less
9 than 1 to 9.

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1 14. (Amended) The disc as set forth in claim 11, wherein the first and second
2 gripping surfaces are comprised of uni-directional surfaces [having a low profile].

1 15. (Amended) The disc as set forth in claim 11, wherein the first and second
2 gripping surfaces are comprised of segmented, staggered, and uni-directional surfaces
3 [having a low profile].

1 16. (Amended) The disc as set forth in claim 11, wherein the first and second
2 gripping surfaces have uni-directional surfaces to present a greater frictional force to
3 movement along the disc in a radial direction than to movement along the disc in a tangential
4 direction.